



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

April 4, 2004

MEMORANDUM

SUBJECT: National Remedy Review Board Recommendations for the Omaha Lead Superfund Site

FROM: Jo Ann Griffith, Chair
National Remedy Review Board

A handwritten signature in black ink, appearing to read "Jo Ann Griffith", is written over the name in the "FROM" field.

TO: Cecilia Tapia, Director
Superfund Division

Purpose:

The National Remedy Review Board (NRRB) has completed its review of the proposed cleanup action for the Omaha Lead Superfund Site in Omaha, Nebraska. This memorandum documents the NRRB's advisory recommendations.

Context for NRRB Review:

The Administrator announced the NRRB as one of the October 1995 Superfund Administrative Reforms to help control response costs and promote consistent and cost-effective decisions. The NRRB furthers these goals by providing a cross-regional, management-level, "real time" review of high cost proposed response actions prior to their being issued for public comment. The Board reviews all proposed cleanup actions that exceed its cost-based review criteria.

The NRRB evaluates the proposed actions for consistency with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and relevant Superfund policy and guidance. It focuses on the nature and complexity of the site; health and environmental risks; the range of alternatives that address site risks; the quality and reasonableness of the cost estimates for alternatives; regional, state/tribal, and other stakeholder opinions on the proposed actions, and any other relevant factors.

Generally, the NRRB makes advisory recommendations to the appropriate regional decision maker. The Region will then include these recommendations in the administrative record for the site, typically before it issues the proposed cleanup plan for public comment. While the Region is expected to give the Board's recommendations substantial weight, other important factors, such as subsequent public comment or technical analyses of response options, may influence the final regional decision. The Board expects the regional decision maker to respond in writing to its recommendations within a reasonable period of time, noting in particular how the recommendations influenced the proposed cleanup decision, including any effect on the estimated cost of the action. It is important to remember that the NRRB does not change the Agency's current delegations or alter in any way the public's role in site decisions.

Overview of the Proposed Action:

EPA began sampling residential properties and properties that were used to provide licenced child care services in March 1999. To date, approximately 15,500 residential properties have been tested for soil lead concentration. Only those properties located within an area near downtown Omaha have been found to have lead concentrations consistently above 400 ppm. This general area is bounded by 45th Street to the west, the edge of downtown Omaha to the east, Ames Avenue to the north and L Street to the south. These are approximate boundaries and should not be considered absolute. Although exceeding the screening level is very common for yard soil in this area, it is important to note that only about 40% of the yards that EPA has tested actually exceed this level. Soil in Council Bluffs Iowa and Carter Lake Iowa are not found consistently above this concentration. The Region's preferred alternative, as presented to the Board, is to utilize a combination of soil removal, phosphate treatment, and ongoing health education to address the lead in the soil.

NRRB Advisory Recommendations:

The NRRB reviewed the information package describing this proposal and discussed related issues with Mark Doolan and Donald Bahnke on March 4, 2004. Based on this review and discussion, the Board offers the following comments:

1. The site, as defined by the Region, is very large, extending several miles from the former lead refinery. The package provided to the Board indicated that area properties had been contaminated as a result of air emissions from lead operations, consumer products, and leaded gas exhaust from vehicles. Also, information provided at the meeting on speciation studies indicated that on average about 38 percent of the lead is associated with refining. Given the large area which is proposed to be addressed under the Superfund program, the Board recommends that the Region provide additional information in the decision documents to justify the boundaries of the Superfund site. This additional information could include a more representative lead background level, discussion of the state/city average compared to the affected area.
2. The package provided to the Board clearly described the Region's proposed remedy to include both the removal and in-situ treatment of lead-contaminated soils, depending on the lead concentrations, with an associated cost of about \$100 million. However, the

viability of the treatment component is the subject of phosphate treatability studies which the Region indicated could take up to two years and yet are only beginning at this time. In response to questions at the meeting about the impact on the remedy if phosphate treatment is found to be ineffective, the Region indicated that the planned decision documents would be selecting a total excavation remedy with a cost of about \$200 million. On-site soil treatment would only be used pending the successful outcome of the pilot studies. In view of the ongoing studies of phosphate treatment and its ability to be used in a residential setting, the Board recommends that the Region proceed with an interim remedy ROD to address the more-highly contaminated residential properties (via excavation and off-site disposal of soils). Once the treatability studies for phosphate treatment have been completed, and a determination made of the effectiveness of its use to remediate the lesser-contaminated properties, the Region can proceed with a subsequent proposed plan for public comment describing how remaining properties will be addressed.

3. The information package provided to the Board states that no institutional controls are planned for the Omaha site since the combined soil removal and phosphate treatment will control the risks caused by historical lead processing. However, the Region states that if contaminated soil remains below the 12-inch excavation depth, a marker barrier will be installed. The Board recommends that the decision documents clearly articulate this potential circumstance, and associated needs for institutional controls, as part of the selected remedy. The Board encourages that some type of control be put in place to ensure that workers or future residents understand what those barriers mean. Further, in yards where phosphate treatment might ultimately be used, then the Region should also discuss what type of control/notification is needed as a result of placement.
4. The Region stated that the modified cost estimates presented in the information package assume that the excavated lead-contaminated soil will be used as daily cover at an offsite landfill at approximately \$14/ton. This would equate to a total disposal cost of \$14 million. Since the final disposal location has not yet been determined, the Board is concerned that the estimated one million tons of soil removed will not all be disposed as daily cover. Therefore, the Region is encouraged to work with the State of Nebraska to identify potential disposal options for the contaminated soil in order to develop a range of cost estimates for incorporation into the appropriate decision documents.
5. The information package presented to the Board indicates that the preliminary remediation goal (PRG) for lead will be based on site-specific bioavailability measurements and may be less than the 400 ppm screening level based on default values in EPA guidance. The Region is proposing, as part of the preferred alternative, to implement lead-poisoning prevention activities, in combination with active remediation, to ensure protection of human health at residences. The Board recommends that if prevention activities are necessary for protection, these activities be specified in the decision documents. The Board also recommends that risk management decisions regarding the level of contamination to be protected by prevention activities should be explained in the decision documents and that these activities be portrayed as a form of ICs.

6. The package presented to the Board did not include a detailed description of applicable or relevant and appropriate requirements (ARARs), therefore the Board was unable to determine if there are any ARARs issues warranting discussion. The Board assumes the Region will include a detailed ARARs discussion in the decision documents.
7. The Board notes that, although there is extensive documentation of patterns of refinery contamination, other sources may contribute to elevated blood lead concentrations. The Board encourages the Region to coordinate with the Douglas County Health Department, the Agency for Toxic Substances and Disease Registry (ATSDR), and other Agencies as appropriate, to conduct an exposure study or, at minimum, to monitor long-term trends in blood lead at the site to ensure that there are not any other sources that might be contributing to elevated levels.
8. Because the proposed phosphate treatment technology has been used at few sites to date, residents may be concerned about safety, permanence, and restrictions on use of the treated soil (e.g. gardening). The Board recommends that the Region clearly address such concerns as well as clarify the need for future maintenance of treated soils, in the decision documents.
9. The information package presented to the Board is not clear with regard to the soil sampling program that would be employed to determine if a residential property qualifies for remedial action. The Region explained that the sampling methodology would utilize the quadrant and aliquot approach outlined in the “EPA Superfund Residential Lead-Sites Handbook.” The Board recommends that the decision documents clearly present the sampling program specified by the handbook so it is understood by the community. The decision documents should also explain that contaminated dripline soils will not be removed if other yard soil is not contaminated and that partial soil removal will be used where sampling indicated localized contamination exceeding the target concentrations.
10. The package did not include the costs associated with air monitoring during implementation of the active remedy. The Region stated that it planned to rely on results of past monitoring of lead cleanups to show that monitoring would not be necessary. The Board recommends that the Region include regular, ongoing air monitoring, as required by 29 CFR 1910.120, to ensure that lead dust is not spread as a result of the excavation activities.
11. The cost estimates in the package lacked sufficient detail and as a result the Board was unable to perform a detailed evaluation. The Board recommends that the decision document provide a detailed cost estimate as presented in the ROD guidance.
12. The cost estimates in the package presented to the Board included a \$500 per home house interior cleaning for every house remediated. Based on mixed experience on the effectiveness of house cleaning at other sites, the Board recommends that the Region evaluate housecleaning options to ensure it will be effective before widespread implementation.

In addition, the Board recommends that interior cleaning efforts be focused on homes with children whose blood lead levels continue to be elevated after the soil around a house has been remediated.

13. The package provided to the Board was unclear about the extent of yard restoration being included in the proposed remedy. The Board recommends that the decision documents contain more detailed information on the nature of the restoration activities that would follow remediation of contaminated soil. In particular, the Region should clarify when and what type of restoration would occur to ensure the public has sufficient opportunity to provide comments on the proposed approach.

The NRRB appreciates the Region's efforts in working together with the affected stakeholders at this site. We encourage you to include your draft response to these findings with the draft Proposed Plan when it comes into your OSRTI Regional Support Branch for review. The Regional Support Branch will work with both myself and your staff to resolve any remaining issues prior to your release of the Proposed Plan. Once your response is final and made part of the site's Administrative Record, then a copy of this letter and your response will be posted on the NRRB website. We will work with your regional NRRB representative on the timing of the release.

Thank you for your support and the support of your managers and staff in preparing for this review. Please call me at (703) 603-8774 should you have any questions.

cc: M. Cook (OSRTI)
E. Southerland (OSRTI)
David Lopez (OSRTI)
Susan Bromm (OSRE)
NRRB members